

LISTING OF THE CLAIMS

1. (currently amended) A block copolymer corresponding to the following formula:

$I-(B)_n-(A)_m$, in which n is an integer greater than or equal to 1, m an integer less than or equal to n , B a polymer block directly bonded to the core I via a covalent bond, obtained by the polymerization of a mixture of monomers (B_0) comprising:

- from 90 to 100% by weight of at least one monomer (B_1) chosen from the group consisting of linear or branched C_1 - C_{12} alkyl acrylates,

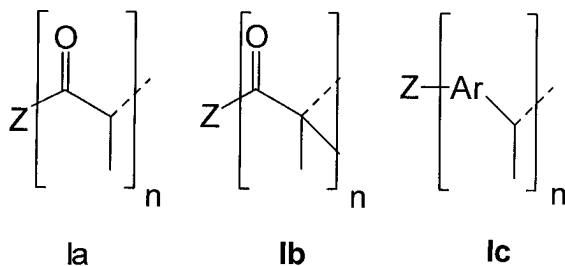
- from 0 to 10% by weight of at least one monomer (B_2) chosen from acids and their derivatives, ~~such as acrylic acid, methacrylic acid~~ and their salts,

A a polymer block directly bonded to the B block via a covalent bond, obtained by the polymerization of a mixture of monomers (A_0) comprising:

- from 95 to 100% by weight of at least one monomer (A_1) chosen from the group consisting of methacrylic monomers, styrene monomers and their derivatives,

- from 0 to 5% by weight of at least one monomer (A_2) chosen from acids and their derivatives, such as acrylic acid, methacrylic acid and their sodium or potassium salts,

the core I being an organic group corresponding to one of the following formulae:



in which Ar denotes a substituted aromatic group and Z is a polyfunctional organic or inorganic radical with a molar mass of greater than or equal to 14.

2. (previously presented) The copolymer according to Claim 1, wherein the said polyfunctional organic radical is selected from the group of radicals consisting of: 1,2-ethanedioxy, 1,3-propanedioxy, 1,4-butanedioxy, 1,6-hexanedioxy, 1,3,5-tris(2-ethoxy)cyanuric acid, polyaminoamines, polyethyleneamines, 1,3,5-tris(2-ethylamino)cyanuric acid, polythioxy, phosphonate and polyphosphonate.

3. (withdrawn) The copolymer according to Claim 1, wherein the said polyfunctional inorganic radical is chosen from the complexes of formula $M^{n+}O_n^-$, in which M is a magnesium, calcium, aluminium, titanium, zirconium, chromium, molybdenum, tungsten, manganese, iron, cobalt, nickel, palladium, platinum, copper, silver, gold, zinc or tin atom.
4. (previously presented) The copolymer according to Claim 1, wherein B_0 comprises:
- from 92 to 98% by weight of monomers B_1 and
 - from 2 to 8% by weight of monomers B_2 .
5. (previously presented) The copolymer according to Claim 1, wherein B_2 is preferably acrylic acid.
6. (previously presented) The copolymer according to Claim 1, wherein A_0 comprises:
- from 95 to 98% by weight of monomers A_1 and
 - from 2 to 5% by weight of monomers A_2 .
7. (previously presented) The copolymer according to Claim 1, wherein A_2 is preferably methacrylic acid.
8. (previously presented) The copolymer according to Claim 1, wherein the B block represents from 50 to 95% by weight of the total weight of the said copolymer.
9. (currently amended) The copolymer according to Claim 1, wherein the B block has a T_g of less than 0°C and preferably of less than -30°C .
10. (previously presented) The copolymer according to Claim 1, wherein the B block has a weight-average mass of between 2000 and 300 000 g/mol, preferably of between 10 000 and 200 000, and a polydispersity index of between 1 and 3.

11. (previously presented) The copolymer according to Claim 1, wherein the A block has a Tg of greater than ambient temperature and preferably of greater than 90°C.

12-16. (cancelled)

17. (previously presented) Adhesive composition comprising:

- from 15 to 50% by weight of the total weight of the composition of at least one block copolymer according Claim 1,

- from 35 to 50% by weight of the total weight of the composition of at least one tackifying resin,

- from 10 to 30% by weight of the total weight of the composition of at least one plasticizer.

18. (previously presented) Composition according to Claim 17, wherein the plasticizer is chosen from oils of trimellitate type, such as trioctyl trimellitate, or predominantly naphthenic oils, such as Catenex N956 from Shell.

19. (previously presented) Composition according to Claim 17, wherein the tackifying resin is chosen from the group consisting of resins based on rosins, on rosin ester, on polyterpene, on hydroxylated polyester, on terpene styrene, on pentaerythritol terpene or on terpene phenol (typically).

20. (previously presented) The Adhesive composition of Claim 17 comprising an adhesive tape or label.

21. (canceled)